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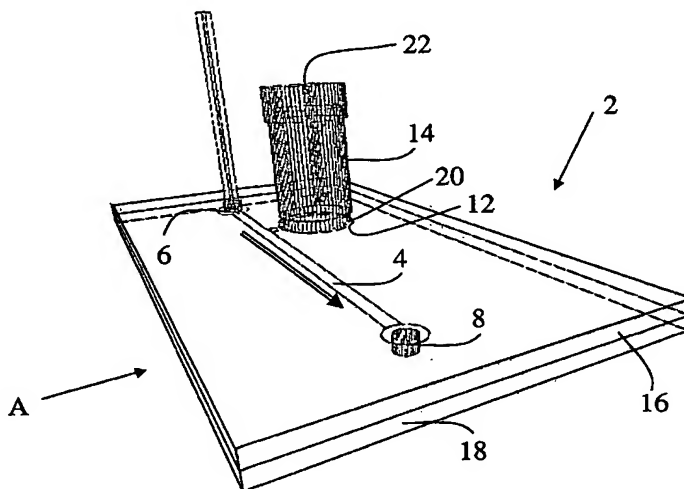
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(54) Title: **POWDER INJECTION SYSTEM AND METHOD**



(57) Abstract: A powder injection method and a powder injection microchip, the powder injection microchip comprising: a gas supply inlet (6) for supplying gas; an outlet (8); a channel (4) in fluid connection with the gas supply inlet and the outlet; a powder inlet (12) in fluid connection with the channel, for receiving a first, open end of a powder reservoir (14), the powder reservoir having an opening (22) at or near to a second end of the powder reservoir to allow egress of gas from the powder reservoir at a point distal to the first end of the powder reservoir. The method comprises the steps of: i) supplying gas via the gas supply inlet (6) to the channel (4) and the powder inlet (12) at a velocity sufficient to cause fluidisation of powder at the powder inlet (12); ii) reducing the supply of gas to cause powder to pass from the powder inlet and to collect in a region of the channel adjacent a point where the powder inlet connects with the channel; and (iii) repeating steps (i) and (ii) as many times as required, subsequent initialisation of step (i) causing the powder collected in the channel to be moved by the gas towards the outlet.

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